

radio communication is performed between a base station and a mobile station, the base station comprising:

first transmitting means for transmitting a first transmitted radio signal to the mobile station;

first receiving means for receiving a first received radio signal from the mobile station; and

first control means for controlling the first transmitting means and the first receiving means to achieve high-speed communication between the base station and the mobile station by using at least two basic-frequency channels, when the mobile station exists in a specific area within a cell to which a basic-frequency channel is assigned, the basic-frequency channel having a multi-carrier OFDM signal; and

the mobile station comprising:

second transmitting means for transmitting a second transmitted radio signal to the base station;

second receiving means for receiving a second received radio signal from the base station; and

second control means for controlling the second transmitting means and the second receiving means to achieve high-speed communication between the base station and the mobile station by using at least two basic-frequency channels, when the mobile station exists in the specific area.

--2. (Amended) The radio communication system according to claim 1, wherein the base station and/or the mobile station

determine whether the mobile station exists in the specific area, from the first received radio signal or the second received radio signal.

--3. (Amended) The radio communication system according to claim 1, wherein the high-speed communication is achieved through one OFDM frequency channel composed of the basic-frequency channels and sub-carrier channels provided among the basic-frequency channels.

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--4. (Amended) A base station for use in a radio communication system in which radio communication is performed between the base station and a mobile station, the base station comprising:

transmitting means for transmitting a transmitted radio signal to the mobile station;

receiving means for receiving a received radio signal from the mobile station; and

control means for controlling the transmitting means and the receiving means to achieve high-speed communication between the base station and the mobile station by using at least two basic-frequency channels, when the mobile station exists in a specific area within a cell to which a basic-frequency channel is assigned, the basic-frequency channel having a multi-carrier OFDM signal.

--5. (Amended) The base station according to claim 4,

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wherein the control means determines whether the mobile station exists in the specific area, from the received radio signal the receiving means has received from the mobile station.

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--7. (Amended) A mobile station for use in a radio communication system in which radio communication is performed between a base station and the mobile station, the mobile station comprising:

transmitting means for transmitting a transmitted radio signal to the base station;

receiving means for receiving a received radio signal from the base station; and

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control means for controlling the transmitting means and the receiving means to achieve high-speed communication between the base station and the mobile station by using at least two basic-frequency channels, when the mobile station exists in a specific area within a cell to which a basic-frequency channel is assigned, the basic-frequency channel having a multi-carrier OFDM signal.

--8. (Amended) The mobile station according to claim 7, wherein the control means determines whether the mobile station exists in the specific area, from the received signal the receiving means has received from the base station.

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--10. (Amended) A radio communication system in which

radio communication is performed between a base station and a mobile station, the radio communication system comprising:

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a plurality of first-type cells to which each of a plurality of basic-frequency channels is assigned respectively, each channel comprising a multi-carrier OFDM signal; and

a plurality of second-type cells, each of which is provided in one first-type cell of the plurality of first-type cells, to which the basic-frequency channels are assigned to achieve high-speed communication between the base station and the mobile station.

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--12. (Amended) A method of performing radio communication between a base station and a mobile station, the method comprising the steps of:

performing radio communication between the base station and the mobile station through a basic-frequency channel assigned to a cell, the basic-frequency channel comprising a multi-carrier OFDM signal; and

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performing high-speed communication between the base station and the mobile station, through the basic-frequency channels when the mobile station exists in a specific area within the cell.

--13. (Amended) The method according to claim 12, further comprising the step of